

(19)



JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

(11) Publication number: 05257047 A

(43) Date of publication of application: 08 . 10 . 93

(51) Int. Cl.

G02B 7/04

(21) Application number: 03109170

(71) Applicant: KONICA CORP

(22) Date of filing: 14 . 05 . 91

(72) Inventor: HONDA YUICHI

(54) CAM MEMBER FOR ZOOM LENS

COPYRIGHT: (C)1993, JPO&amp;Japio

(57) Abstract:

**PURPOSE:** To set the drafting direction of a metallic mold which does not generate an under-cut on a cam surface at the time of molding a cam member to be built in a zoom lens barrel of a synthetic resin.

**CONSTITUTION:** The drafting direction  $\theta$  of the metallic mold is set by calculation from the angle in the circumferential direction of a cam groove 6 based on the center line of a cam cylinder 5, the rising angle of the cam groove 6 with respect to the optical axis as well as the inside diameter and outside diameter of the cam cylinder formed with the cam groove 5 in order to mold the cam cylinder 5 to be built into the zoom lens barrel by using the synthetic resin material in such a manner as not to generate the under-cut in, for example, the cam groove 6 formed on the cam cylinder 5. The drafting direction  $\theta$  of the metallic mold having not the under-cut by calculation as well as the same in the case of forming the protruding shape cam on the cam cylinder 5.

